

(12) UK Patent Application (19) GB (11) 2 369 706 (13) A

(43) Date of A Publication 05.06.2002

(21) Application No 0118360.7

(22) Date of Filing 27.07.2001

(30) Priority Data

(31) 137733

(32) 07.08.2000

(33) IL

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(51) INT CL⁷

G06K 7/00, G06F 17/60 // G06F 153:00

(52) UK CL (Edition T)

G4M MAA MBF MBX MB3 MB4

U1S S2124 S2204 S2206 S2215

(56) Documents Cited

GB 2130410 A

WO 98/40863 A1

EP 0266913 A2

WO 96/01464 A1

(58) Field of Search

UK CL (Edition T) G4M MAA

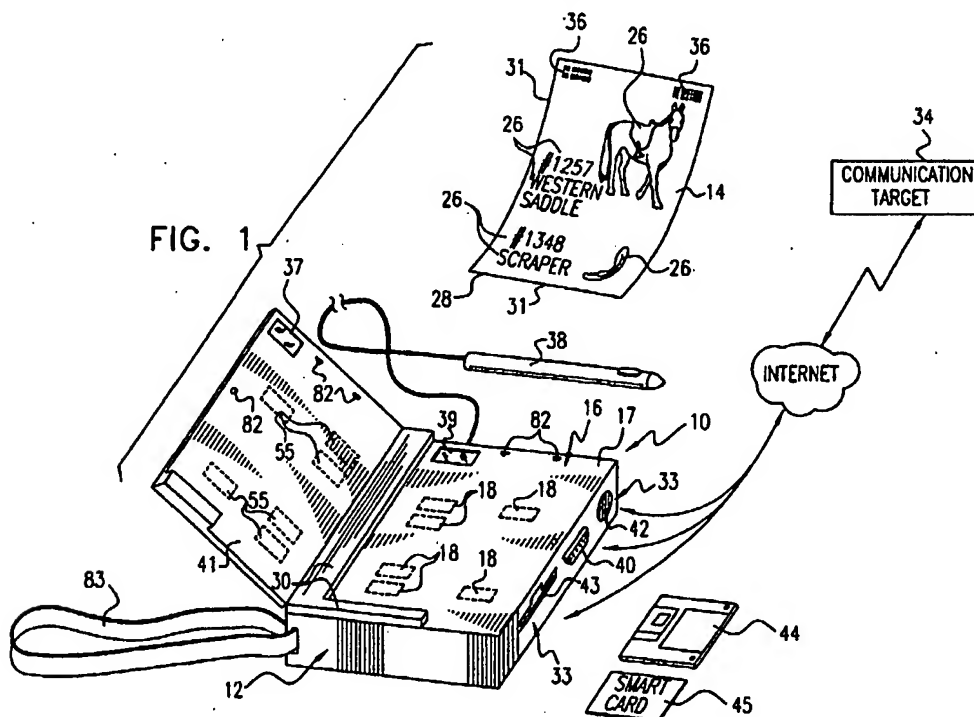
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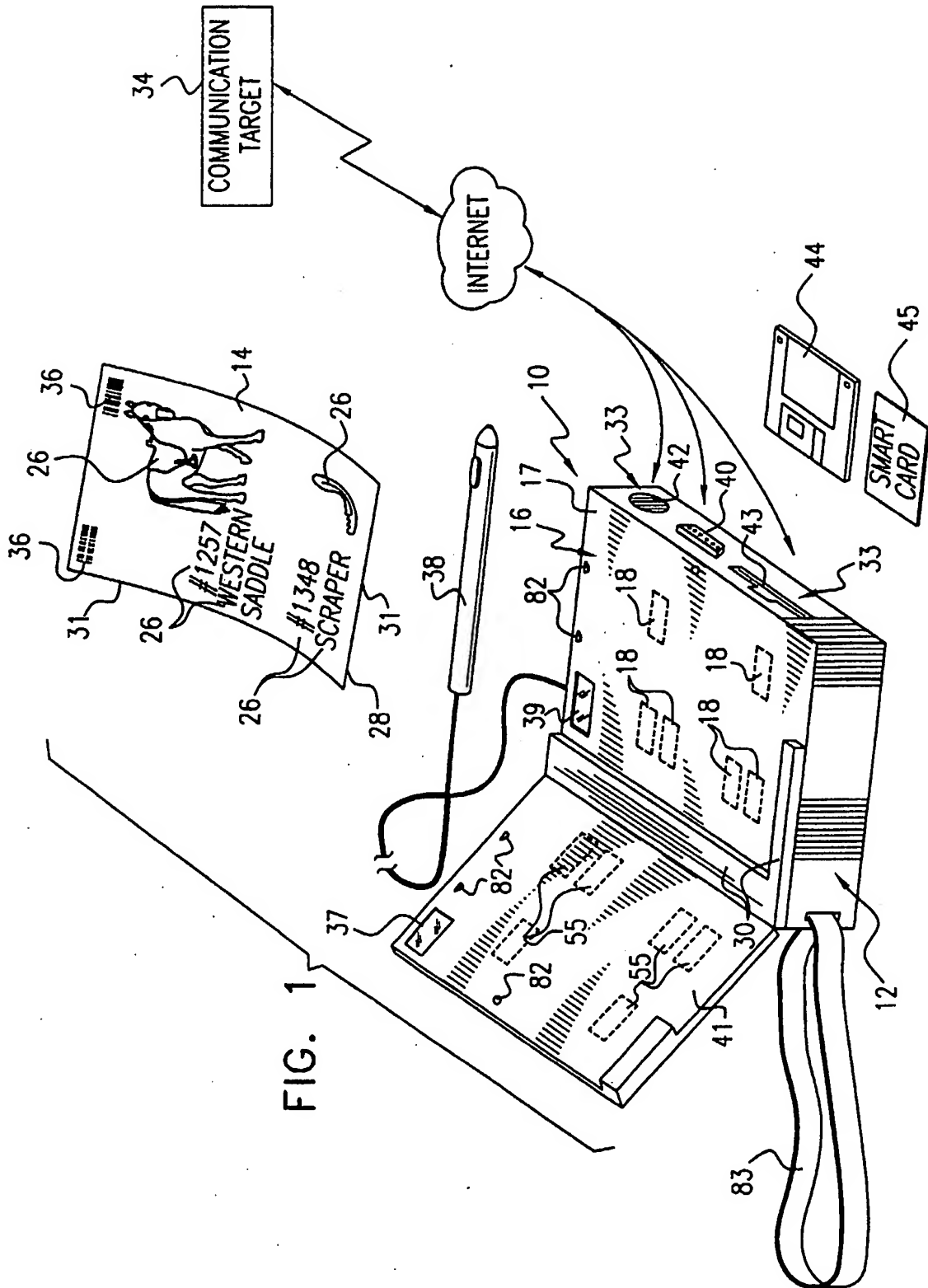
(54) Abstract Title

Communications device

(57) A communications device includes a user interface unit 12 adapted to receive a customization sheet 14, including at least one human-sensible symbol 26 for indicating an input location and at least one machine-readable symbol 36 for identifying a parameter associated with the customization sheet. Communication apparatus 33 receives signals from the user interface unit 12, including an indication of an input location 18 selected by a user corresponding to a symbol 26 and transmits the signals to a communication target 34. The device may be used for internet shopping or to remotely control a TV.



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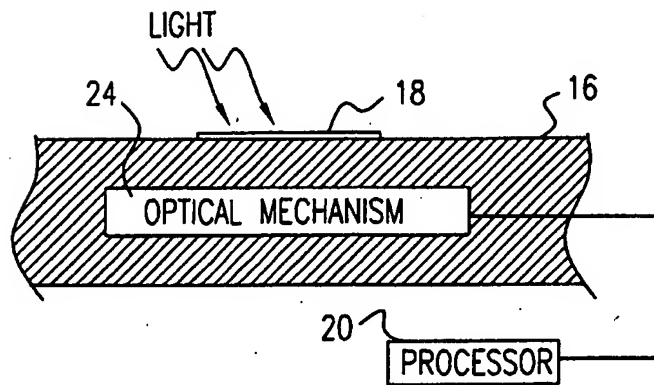
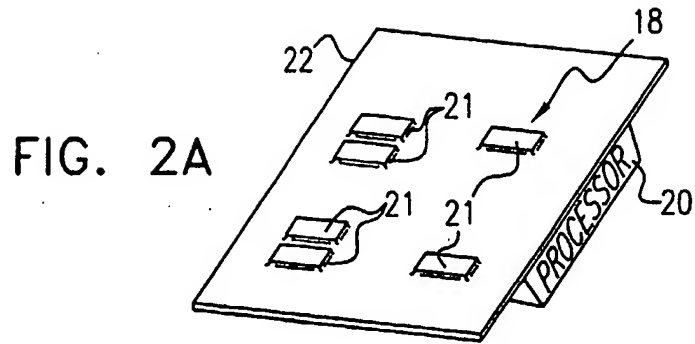


FIG. 2B

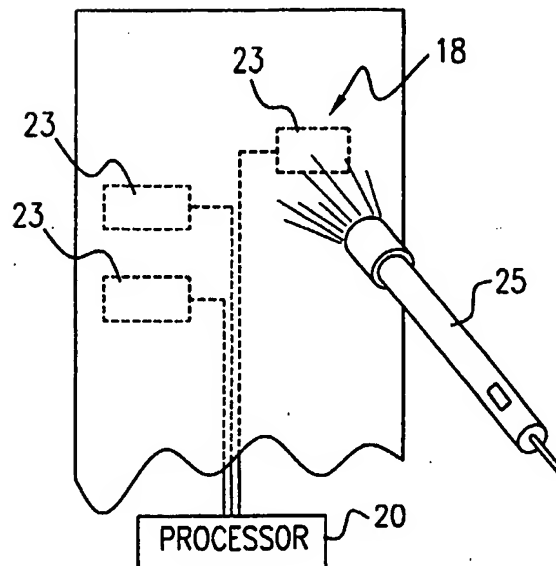


FIG. 2C

FIG. 3

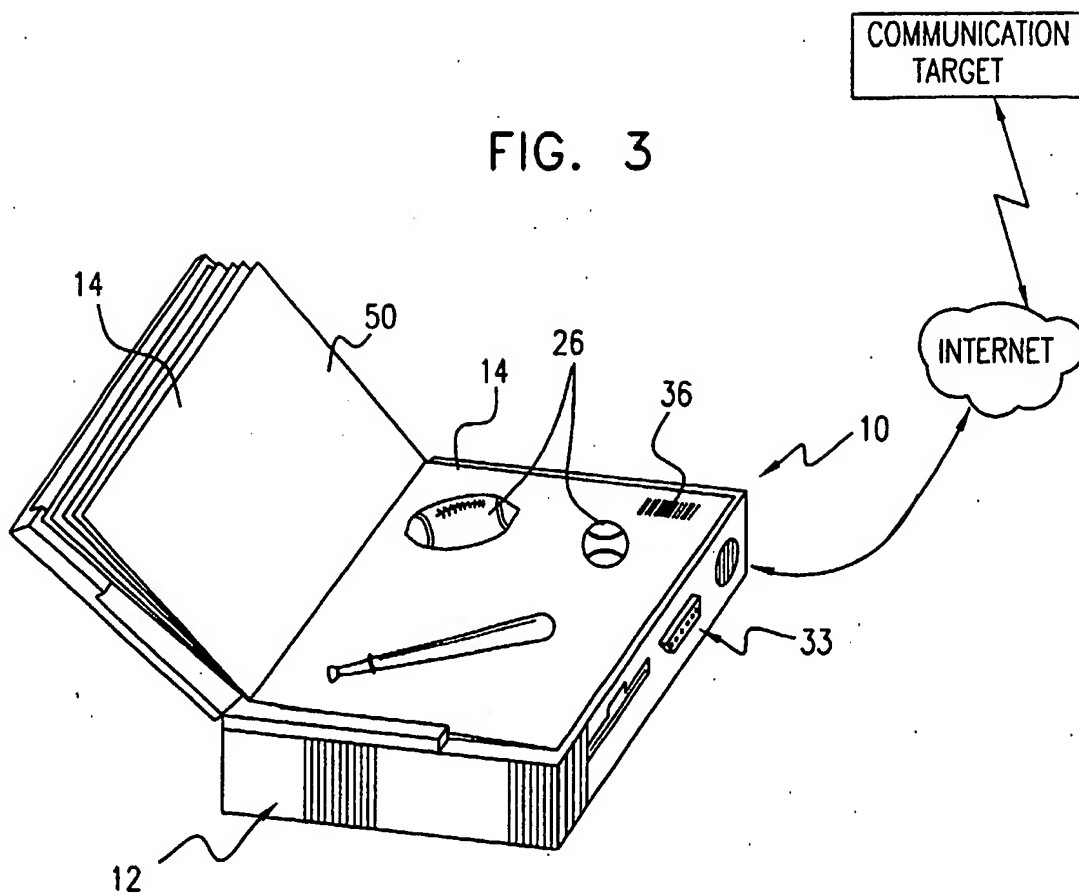
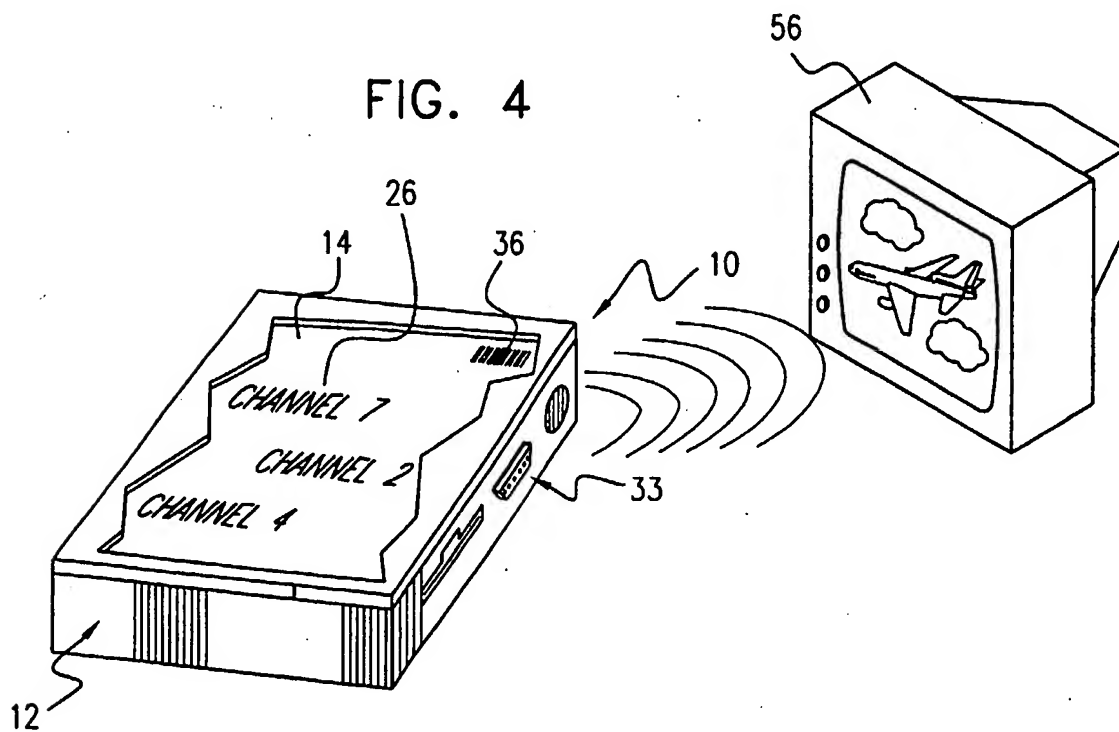
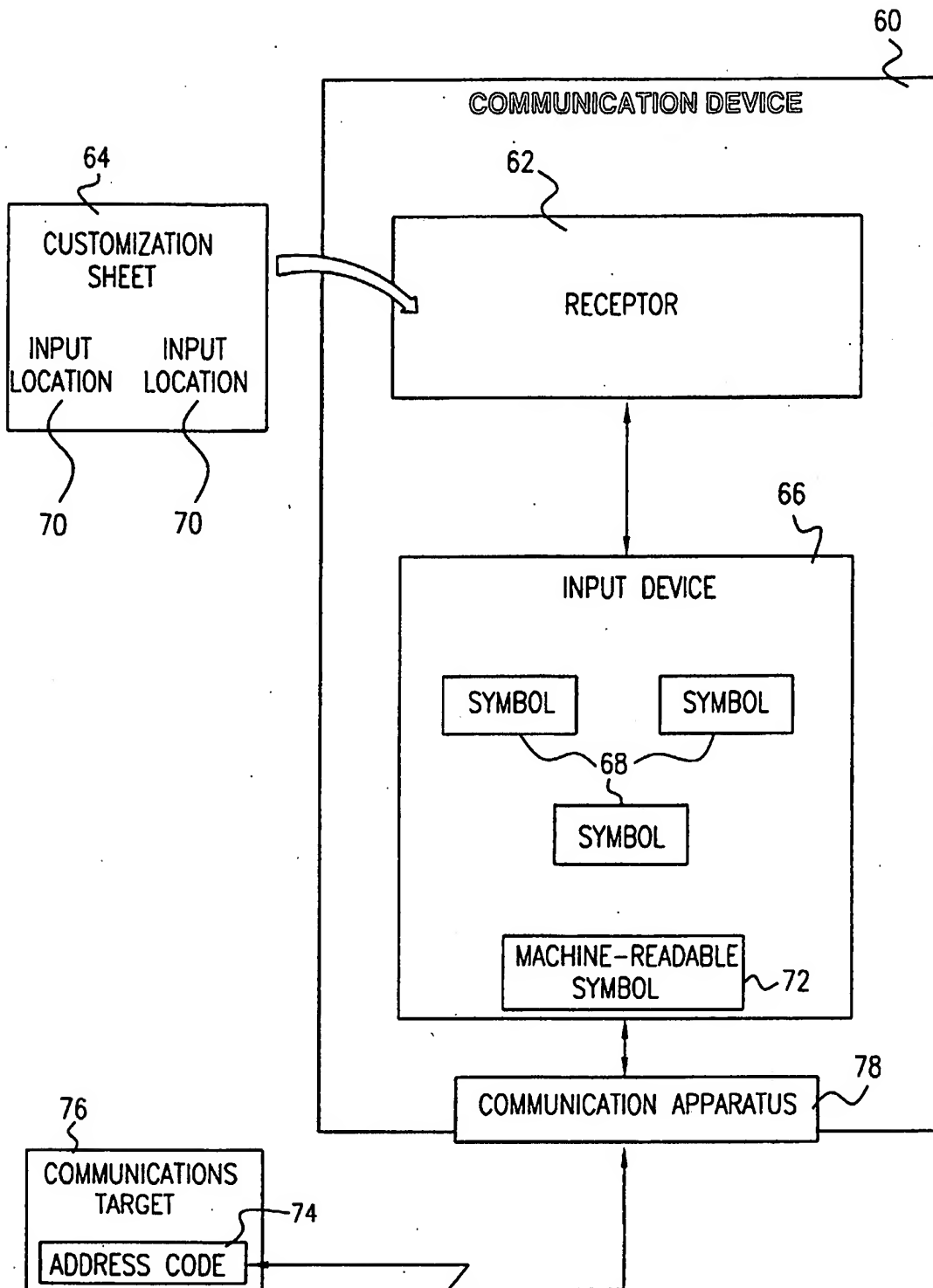


FIG. 4



H/H

FIG. 5



Communications Device For Communicating With A Communications Target
FIELD OF THE INVENTION

The present invention relates generally to apparatus and methods for issuing electronic
5 commands from printed reading material, such as ordering items, or for issuing remote
control commands for operating devices, such as television.

BACKGROUND OF THE INVENTION

It is well known how to order merchandise from a printed catalog. The catalog
displays goods, and the purchaser effects transfer of purchasing information by voice
10 communication over telephone, or by written communication sent by mail or fax. It is also
well known to order merchandise electronically, such as by connecting to the Internet,
opening a website that displays sporting goods, books, electrical appliances, or any other kind
of purchasable item, and clicking on desired items. The clicking action effects transfer of
purchasing information, including the items sought, purchaser identification, financial
15 information, and the like, to the vendor of the items.

Although e-commerce is rapidly growing and becoming more and more widespread,
nevertheless most purchasers currently do not know how to use a PC, let alone have access to
the Internet. Of those who do have access, many are insufficiently proficient in the art of
"surfing", and can sometimes find the task of surfing through websites and choosing the
20 particular item, tedious, time-consuming and frustrating.

Other methods of electronically ordering goods are known. Of particular relevance is
US Patent 4,654,482 to DeAngelis, the disclosure of which is incorporated herein by
reference. In the system described in DeAngelis, goods to be ordered are illustrated on printed
materials, such as catalog pages, and next to the item description is a machine readable bar
25 code. A user wishing to order an item passes a bar code reader over the bar code of the
desired item and the purchase order is communicated over a direct distance dial telephone
network. Authentication of the user identity is performed in accordance with secret
information shared by the user and vendor.

Another technology for accessing the Internet has been recently developed by
30 DIGIMARC Corporation, Tualatin, Oregon, USA, and is commercially available under the
name DIGIMARC MEDIABRIDGE. A printed page of a magazine, for example, is digitally
watermarked with web-access information. A specially prepared Web camera, connected to
the desired website, is designed to read the watermark. The camera automatically effects
communication with the desired web page upon reading the watermark.

SUMMARY OF THE INVENTION

The present invention seeks to provide a novel communications device for issuing electronic commands from printed material, such as ordering items, or for issuing remote control commands for operating devices, such as television. The device is compact and portable and can enable any user to easily connect to a network, such as the Internet, using any available well-defined communications protocol enacted over a communications carrier to a communications target. For example, with the present invention, a TV guide can be utilized as a remote control device for a television. A YELLOW PAGES directory can be used to dial, connect and order a particular service. A catalog of telephone services (e.g., psychics, chat) can be used to dial, connect, and provide a particular service. Payment for the service can be effected with a payment card reader, such as a magstripe reader or smart card reader. For example, the printed page would contain the public information that enables the transaction, whereas the smart card would contain the secret information for securing the transaction.

There is thus provided in accordance with a preferred embodiment of the present invention a communications device for communicating with a communications target, the device including a user interface unit adapted to receive a customization sheet, the customization sheet including at least one human-sensible symbol for indicating an input location associated with an interpretation of the symbol, and at least one machine-readable symbol for identifying a parameter associated with the customization sheet, and communication apparatus operative to receive a signal from the user interface unit, the signal including an indication of an input location selected by a user of the communications device, and to transmit the signal to a communication target.

In accordance with a preferred embodiment of the present invention a customization sheet is provided including at least one human-sensible symbol for indicating an input location associated with an interpretation of the symbol, and at least one machine-readable symbol for identifying a parameter associated with the customization sheet.

Further in accordance with a preferred embodiment of the present invention the parameter associated with the customization sheet includes at least one of the following a destination parameter defining a target for communication, and a reference datum of the customization sheet wherein coordinates of the at least one human-sensible symbol are referenced with respect to the datum.

Still further in accordance with a preferred embodiment of the present invention the communication apparatus is operative to transmit the signal via the Internet, and the

communication target includes a URL. The at least one machine-readable symbol may be a bar code.

Additionally in accordance with a preferred embodiment of the present invention the user interface unit includes a processor, a detection board upon which the customization sheet is placeable, and a detection flap foldable over the customization sheet when placed on the detection board, wherein at least one of the detection flap and the detection board includes a plurality of sensing zones in electrical communication with the processor, each sensing zone being operative to sense an action performed on the at least one human-sensible symbol at the input location and to send a signal to the processor upon sensing the action, wherein the processor processes the signal and communicates the processed signal to the communication apparatus.

In accordance with a preferred embodiment of the present invention the customization sheet includes a reference datum wherein coordinates of the at least one human-sensible symbol are referenced with respect to the datum, and wherein the detection board includes a datum element, wherein when the reference datum is aligned with the datum element, the at least one human-sensible symbol and the input location of the customization sheet are in proper registration with the sensing zones.

Further in accordance with a preferred embodiment of the present invention the datum element includes a protrusion against which an edge of the customization sheet abuts.

Still further in accordance with a preferred embodiment of the present invention the communication apparatus includes a network connection port for communicating with a network. The sensing zones may include touch-sensitive electronic input contacts.

In accordance with a preferred embodiment of the present invention the detection board includes an optical mechanism that measures a difference in transmission of light at the sensing zone.

There is also provided in accordance with a preferred embodiment of the present invention a communications device for communicating with a communications target, the device including a receptor for receiving a customization sheet, an input device having at least one human-sensible symbol uniquely associated with at least one input location on the customization sheet and operative to receive a representation of an input location on the customization sheet, at least one machine-readable symbol operatively associated with the input device and operative to identify at least one address code of the communications target, and communication apparatus operatively associated with the at least one machine-readable symbol and operative to receive a signal indicating the input location on the customization

sheet and to establish communication with the communication target by employing the at least one address code.

There is also provided in accordance with a preferred embodiment of the present invention a method for carrying out a transaction via wireless communication including providing a communications device adapted to receive a catalog and operative to receive user choice input, placing an open page of a catalog in operative association with the communications device, determining a transaction partner based, at least in part, on a first indication included in the page of the catalog, determining a transaction to be carried out based on user choice input based, at least in part, on a second indication included in the catalog, and wirelessly carrying out the transaction with the transaction partner.

There is also provided in accordance with a preferred embodiment of the present invention a method for remotely controlling a device, including providing an information sheet including at least one human-sensible symbol associated with a command that controls a device, providing a communications device adapted to receive an information sheet and operative to receive user choice input, placing the information sheet in operative association with the communications device, determining an action to be carried out based on user choice input based, at least in part, on an indication of the at least one human-sensible symbol included in the information sheet, and wirelessly transmitting a command to the device to carry out the action upon the indication of the at least one human-sensible symbol.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be understood and appreciated more fully from the following detailed description, taken in conjunction with the drawings in which:

Fig. 1 is a simplified pictorial illustration of a communications device constructed and operative in accordance with a preferred embodiment of the present invention;

Fig. 2A is a simplified pictorial illustration of a sensing zone, constructed and operative in accordance with a preferred embodiment of the present invention, which includes a pad of a touch pad;

Fig. 2B is a simplified pictorial illustration of a sensing zone, constructed and operative in accordance with another preferred embodiment of the present invention, which includes an optical mechanism that measures a difference in transmission of light at the sensing zone;

Fig. 2C is a simplified pictorial illustration of a sensing zone, constructed and operative in accordance with yet another preferred embodiment of the present invention, which includes a zone which can be activated by a light pen;

Fig. 3 is a simplified pictorial illustration of using the communications device of Fig. 1 to wirelessly carry out a transaction with a transaction partner, in accordance with a preferred embodiment of the present invention;

Fig. 4 is a simplified pictorial illustration of using the communications device of Fig. 1 to remotely controlling a device, in accordance with a preferred embodiment of the present invention; and

Fig. 5 is a simplified block diagram of a communications device constructed and operative in accordance with another preferred embodiment of the present invention.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

Reference is now made to Fig. 1 which illustrates a communications device 10 constructed and operative in accordance with a preferred embodiment of the present invention. Communications device preferably includes a user interface unit 12 adapted to receive a customization sheet 14, described more in detail hereinbelow. Customization sheet 14 may be a single sheet of paper, or a sheet from a catalog or a catalog printed to customized specifications. User interface unit 12 preferably includes a detection board 16 with a generally flat surface 17 upon which customization sheet 14 is placed.

Customization sheet 14 preferably includes one or more human-sensible symbols 26 for indicating an input location associated with an interpretation of the symbol 26. In the embodiment illustrated in Fig. 1, examples of such human-sensible symbols 26 include a picture of a horse saddle or a scraper (used to scrape water off the horse after a bath). Symbols 26 do not have to be pictorial, and can be alphanumeric. For example, as seen in Fig. 1, the name of the item, such as "scraper", or its part number, such as 1348, can also serve as a valid human-sensible symbol 26.

Communications device 10 enables a user to place customization sheet 14 on detection board 16 and perform some action associated with one of the human-sensible symbols 26, the action being communicated to a communications target 34. The user input to effect the desired action is preferably detected by one or more sensing zones 18, which are input locations uniquely associated with a particular symbol 26 for inputting an action associated with that particular symbol 26. In a preferred embodiment, sensing zones 18 are touch-sensitive electronic input pads or contacts located in a detection flap 41 foldable over customization sheet 14, as is explained hereinbelow.

In order to facilitate communication with the communications target 34, customization sheet 14 is preferably provided with one or more machine-readable symbols 36 for identifying a parameter associated with customization sheet 14. For example, customization sheet 14 may

have printed thereon a bar code which indicates a destination parameter defining the particular communications target 34. The bar code is preferably printed on the same side of the customization sheet 14 as are symbols 26. The bar code provides the necessary routing information for properly transmitting the desired information to the communications target 34. Detection flap 41 preferably includes a bar code reader 37 which can read the machine-readable symbols 36, when detection flap 41 is folded over customization sheet 14.

In the folded-over position, sensing zones 18 embedded (or otherwise incorporated) in detection flap 41 are aligned with the human-sensible symbols 26. Detection flap 41 is preferably formed with cutouts 55, such that when detection flap 41 is in the folded-over position, human-sensible symbols 26 are outlined by cutouts 55. In this manner, cutouts 55 segregate the human-sensible symbols 26 from the rest of customization sheet 14, making it easy for a user to see, select and touch a particular human-sensible symbol 26 of interest. Detection flap 41 detects the user's choice by means of sensing zones 18, and combined with the information specific to customization sheet 14, which is detected by bar code reader 37, an action associated with that particular symbol 26 is effected, as is now explained.

Once the user has touched or otherwise activated one of the sensing zones 18, a signal is sent from the sensing zone 18 to processor 20 for processing the signal. Processor 20 is preferably in electrical communication with communication apparatus 33 which transmits information based on the signal to communications target 34. The information may contain product identification (e.g., request to purchase a saddle, part number of saddle, etc.), as well as customer identification, which may be entered and stored in the memory of processor 20 by the user (Figs. 2A - 2C). The communications target 34 may be a URL transmitted via the Internet wherein the information sent by communication apparatus 33 is received for effecting the action desired, e.g., placing a purchase order for a saddle. Another example of a communications target is a telephone call. In such an example, using the communications protocol, a telephone number is dialed and a pre-recorded voice message queries the potential customer for vending information (for example, "Hello, would you like to purchase a saddle?").

The invention thus provides a method for carrying out a transaction via wireless communication. A catalog 50 (Fig. 3) can be printed with a plurality of customization sheets 14. A user places a page of catalog 50 on detection board 16. Machine-readable symbols 36 of that page of catalog 50, e.g., a bar code, may define a transaction partner, e.g., a vendor on the Internet. The user inputs a type of transaction, by activating one of the sensing zones 18 which serves as the input location for the human-sensible symbol 26 printed on the page of

catalog 50. Communication apparatus 33 then wirelessly carries out the transaction with the transaction partner. A smart card 45 may be provided for reducing security risks in communicating transaction information. ID data, credit authorization, debit limit, etc. are some examples of transaction data that can be contained in smart card 45.

5 It is appreciated by the skilled artisan, that other variations of the abovementioned embodiment are also possible within the scope of the invention. For example, instead of the sensing zones 18 being in detection flap 41, they may be included in detection board 16. In such an embodiment, detection flap 41 preferably does not cover all of the page, but only a portion of the page which has the machine-readable symbols 36. Most preferably, only one
10 page is under detection flap 41, and pressing on symbols 26 for that page only is sensed. The rest of the catalog or other pages are held behind detection board 16 by a suitable strap or other holding device (not shown).

Sensing zones 18 may be constructed in a variety of manners. For example, as shown in Fig. 2A, sensing zone 18 may be a pad 21 of a touch pad 22, wherein touching or pressing
15 pad 21 sends a signal to processor 20. Another example of a suitable sensing zone 18, shown in Fig. 2B, is an optical mechanism 24 that measures a difference in transmission of light at the sensing zone. For example, optical mechanism 24 can measure a break in light from one side of detection board 16 to the other side, which occurs at sensing zone 18. Another example, shown in Fig. 2C, is a zone 23 which can be activated by a light pen 25.

20 Another example of a suitable sensing zone is a resilient and deformable touch screen, such as that described in US Patent 4,816,811, the disclosure of which is incorporated herein by reference. Such a touch screen is constructed of a semi-rigid plastic frame attached to a flexible plastic pouch filled with a soft resilient material which adheres to the surface of the pouch. No matter what type of sensing zone is used to construct communications device 10,
25 in all cases sensing zone 18 sends a signal to processor 20 which processes and interprets the signal. Sensing zones 18 may be arranged in an orderly pattern, such as a grid or matrix, or can be randomly arranged.

Communications device 10 may be constructed with a predetermined number of sensing zones 18, such as the six sensing zones shown in Fig. 1. Customization sheet 14 is
30 printed with the symbols 26 pre-aligned with the six sensing zones 18, so that pressing, touching or "light-penning" any of the symbols 26 activates the corresponding sensing zone 18, thereby making that sensing zone an input location. In such an embodiment, all of the customization sheets 14 should be printed with the particular location of the sensing zones 18 taken into account ahead of time.

Customization sheet 14 preferably includes a reference datum 28 wherein coordinates of human-sensible symbol 26 are referenced with respect to datum 28. For example, customization sheet 14 may be printed with the X-Y position of the symbols 26 (e.g., the saddle, scraper, their description and part numbers), referenced to a Cartesian set of coordinates whose origin is the lower left corner of customization sheet 14, this corner serving as reference datum 28. Detection board 16 preferably includes a datum element 30, such as a protrusion against which one or more edges 31 of customization sheet 14 abut. When customization sheet 14 is placed on detection board 16 and edges 31 abut against datum element 30, reference datum 28 is aligned with datum element 30. This ensures that all of the human-sensible symbols 26 of customization sheet 14 are in proper registration with sensing zones 18.

Communication apparatus 33 may include a network connection port 40 for communicating with a network, or a wireless transmitter 42, such as an infrared transmitter for communicating with the network or with a computer.

Additionally or alternatively, communication apparatus 33 may include an inlet port 43 for inserting therein a floppy disk 44 (or smart card 45). In such an embodiment, data from a customization sheet 14 (such as from a catalog) may be downloaded and stored on floppy disk 44, or on smart card 45 which can secure and encrypt the data. A purchase order can then be placed simply by inserting floppy disk 44 or smart card 45 and making a callback to the vendor via the Internet, for example. Again, ID data, credit authorization, debit limit, etc. are some examples of transaction data contained in smart card 45.

Another device for reading the bar code could be a bar code reader wand 38. Alternatively or additionally, the bar code may be printed on the *opposite* side of customization sheet 14, in which case communications device 10 is preferably provided with a bar code reader 39 which can read the bar code when customization sheet 14 is placed on detection board 16.

Various fasteners may be optionally provided for closing and securing detection flap 41 over customization sheet 14, such as magnetic lugs 82, for example. A carrying strap 83 may also be provided.

Reference is now made to Fig. 4 which illustrates another preferred embodiment of the present invention, wherein a method is provided for remotely controlling a device, such as a television. For example, an information sheet 54, such as a page from a television guide or newspaper, preferably includes one or more human-sensible symbols 26 associated with a command that controls a device, such as a television 56. The user inputs a type of action, e.g.,

switching channels to a higher number channel, by indicating, touching, light-pen-activating or otherwise activating one of the sensing zones 18 which serves as the input location for the human-sensible symbol 26 printed on information sheet 54. Communication apparatus 33 then wirelessly commands television 56 to switch to a higher channel, for example.

5 In the above described embodiments, as mentioned hereinabove, the customization sheets 14 should be printed with the particular location of the sensing zones 18 taken into account ahead of time. Alternatively, communications device 10 can be constructed with a detection board 16 which has a plurality of sensing zones 18 of any size and spacing. The machine-readable symbols 36, e.g., bar code, preferably include reference datum 28 of the
10 current customization sheet 14, including the X-Y coordinates of all of the human-sensible symbols 26. Once customization sheet 14 is placed in proper position beneath detection flap 41, there is a unique correspondence between each human-sensible symbol 26 and the one or more sensing zones 18 which the detection flap 41 outlines and defines. By reading the bar code, processor 20 knows the coordinates of all of the symbols 26 and can thus uniquely and
15 correctly associate the input locations of each symbol 26 with the particular sensing zones 18.

 Reference is now made to Fig. 5 which illustrates a block diagram of a communications device 60 constructed and operative in accordance with another preferred embodiment of the present invention. Communications device 60 preferably includes a receptor 62 for receiving a customization sheet 64. An input device 66 is provided that has
20 one or more human-sensible symbols 68 uniquely associated with one or more input locations 70 on customization sheet 64. Input device 66 is operative to receive a representation of one of the input locations 70 on customization sheet 64. One or more machine-readable symbols 72, such as a bar code, are preferably operatively associated with input device 66 and operative to identify one or more address codes 74 of a communications target 76.

25 Communication apparatus 78 is preferably operatively associated with machine-readable symbols 72, and is operative to receive a signal indicating input locations 70 on customization sheet 64 and to establish communication with communication target 76 by employing address codes 74. The operation of communications device 60 is preferably similar to that of communications device 10, described hereinabove, *mutatis mutandis*.

30 In the foregoing description, communications device 10 is constructed as a separate dedicated device. In accordance with another preferred embodiment of the present invention, personal electronic/communications devices can be converted into communications device 10. For example, cell phones, Palm pilots, palm PCs, electronic books and the like can be programmed to serve as the communications device 10. For example, such devices can be

programmed to allow input of human-sensible symbols 26 and machine-readable symbols 36
by download or local control, and inclusion of a bar code reader, for example.

It will be appreciated by persons skilled in the art that the present invention is not limited by what has been particularly shown and described hereinabove. Rather the scope of
5 the present invention includes both combinations and subcombinations of the features described hereinabove as well as modifications and variations thereof which would occur to a person of skill in the art upon reading the foregoing description and which are not in the prior art.

CLAIMS

What is claimed is:

1. A communications device for communicating with a communications target, the device comprising:
 - 5 a user interface unit adapted to receive a customization sheet, the customization sheet comprising:
 - at least one human-sensible symbol for indicating an input location associated with an interpretation of said symbol; and
 - at least one machine-readable symbol for identifying a parameter associated
 - 10 with said customization sheet; and
 - communication apparatus operative to receive a signal from said user interface unit, said signal comprising an indication of an input location selected by a user of said communications device, and to transmit said signal to a communication target.
2. The communications device according to claim 1 and further comprising a
- 15 customization sheet comprising:
 - at least one human-sensible symbol for indicating an input location associated with an interpretation of said symbol; and
 - at least one machine-readable symbol for identifying a parameter associated with said customization sheet.
- 20 3. The communications device according to claim 2 wherein said parameter associated with said customization sheet comprises at least one of the following:
 - a destination parameter defining a target for communication; and
 - a reference datum of said customization sheet wherein coordinates of said at least one human-sensible symbol are referenced with respect to said datum.
- 25 4. The communications device according to any of the preceding claims wherein said communication apparatus is operative to transmit said signal via the Internet, and said communication target comprises a URL.
5. The communications device according to claim 2 or claim 3 wherein said at least one machine-readable symbol comprises a bar code.
- 30 6. The communications device according to claim 2 wherein said user interface unit comprises:
 - a processor;
 - a detection board upon which said customization sheet is placeable; and

a detection flap foldable over said customization sheet when placed on said detection board, wherein at least one of said detection flap and said detection board comprises a plurality of sensing zones in electrical communication with said processor, each sensing zone being operative to sense an action performed on said at least one human-sensible symbol at said input location and to send a signal to said processor upon sensing said action, wherein said processor processes said signal and communicates the processed signal to said communication apparatus.

7. The communications device according to claim 6 wherein said customization sheet comprises a reference datum wherein coordinates of said at least one human-sensible symbol are referenced with respect to said datum, and wherein said detection board comprises a datum element, wherein when said reference datum is aligned with said datum element, said at least one human-sensible symbol and said input location of said customization sheet are in proper registration with said sensing zones.

8. The communications device according to claim 7 wherein said datum element comprises a protrusion against which an edge of said customization sheet abuts.

9. The communications device according to any of claims 6-8 wherein said communication apparatus comprises a network connection port for communicating with a network.

10. The communications device according to any of claims 6-9 wherein said sensing zones comprise touch-sensitive electronic input contacts.

11. The communications device according to any of claims 6-9 wherein said detection board comprises an optical mechanism that measures a difference in transmission of light at said sensing zone.

12. A communications device for communicating with a communications target, the device comprising:

a receptor for receiving a customization sheet;

an input device having at least one human-sensible symbol uniquely associated with at least one input location on said customization sheet and operative to receive a representation of an input location on said customization sheet;

at least one machine-readable symbol operatively associated with said input device and operative to identify at least one address code of said communications target; and

communication apparatus operatively associated with said at least one machine-readable symbol and operative to receive a signal indicating said input location on said

customization sheet and to establish communication with said communication target by employing said at least one address code.

13. A method for carrying out a transaction via wireless communication comprising:
providing a communications device adapted to receive a catalog and operative to

5 receive user choice input;

placing a page of a catalog in operative association with said communications device;

determining a transaction partner based, at least in part, on a first indication comprised
in said page of said catalog;

determining a transaction to be carried out based on user choice input based, at least in
10 part, on a second indication comprised in said catalog; and

wirelessly carrying out the transaction with the transaction partner.

14. A method for remotely controlling a device, comprising:

providing an information sheet comprising at least one human-sensible symbol
associated with a command that controls a device;

15 providing a communications device adapted to receive an information sheet and
operative to receive user choice input;

placing said information sheet in operative association with said communications
device;

determining an action to be carried out based on user choice input based, at least in
20 part, on an indication of said at least one human-sensible symbol comprised in said
information sheet; and

wirelessly transmitting a command to the device to carry out the action upon the
indication of said at least one human-sensible symbol.

15. The device according to any of the preceding claims 1-12 and substantially as
25 described hereinabove.

16. A communications device for communicating with a
communications target, as hereinbefore described with
reference to the accompanying drawings.

17. A method for remotely controlling a device substantially
as hereinbefore described with reference to the accompanying
drawings.



Application No: GB 0118360.7
Claims searched: 1 to 17

Examiner: John Donaldson
Date of search: 28 March 2002

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK Cl (Ed.T): G4M(MAA)
Int Cl (Ed.7): G06F 17/00, 17/60; G06K 7/00, 7/01, 17/00
Other: Online:WPI, EPODOC, JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2130410 A (COLE ELECTRONICS), see abstract	1, 2, 12
X	EP 0266913 A2 (ESCORP), see page 3, lines 5 to 55, page 4, lines 12 to 17	1, 2, 12
X	WO 98/40863 A1 (TV INTERACTIVE DATA), see abstract, page 14, line 1 to page 18, line 14, page 22, lines 5 to 29, page 23, line 24 to page 24, line 2	1 to 5, 12 to 14
X	WO 96/01464 A1 (TV INTERACTIVE DATA), see abstract, page 20, lines 4 to 17, page 55, line 3 to page 60, line 2	1 to 3, 6 to 14

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.